

IN THE CLAIMS

The pending claims are:

Listing of Claims

1-25. (Canceled).

26. (Previously Presented) A method for communicating control information associated to uplink data on an Enhanced Dedicated Channel (E-DCH) of a Universal Mobile Telecommunication System (UMTS), wherein the method is performed by a user equipment (UE) and comprises:

transmitting via an Enhanced Dedicated Physical Control Channel (E-DPCCH) control information associated to uplink data to a Node B controlling a serving cell, wherein the control information comprises a happy-bit that, when set, indicates to the Node B that the user equipment could use more than a maximum amount of uplink resources allowed by scheduling grants for transmitting scheduled uplink data via the E-DCH, and

not setting the happy-bit, if the user equipment transmits uplink data via the E-DCH without utilizing the maximum amount of uplink resources for scheduled uplink data as allowed by scheduling grants.

27. (Previously Presented) The method according to claim 26, further comprising not setting the happy-bit if:

- a) the UE has not enough power available to transmit at a higher data rate or
- b) the user equipment is not transmitting as much scheduled uplink data as allowed by the maximum uplink resources set by scheduling grants.

28. (Previously Presented) The method according to claim 26, further comprising the step of receiving a scheduling grant setting the maximum amount of uplink resources the user equipment is allowed to utilize for the transmission of scheduled uplink data via the E-DCH from the Node B controlling the serving cell.

29. (Previously Presented) The method according to claim 28, wherein a scheduling grant updates a serving grant indicating a maximum power ratio the user equipment is allowed to use for transmissions of scheduled uplink data on the E-DCH.

30. (Previously Presented) The method according to claim 29, wherein the maximum power ratio defines a power ratio of the E-DPDCH channel and a Dedicated Physical Control Channel (DPCCH) in the UMTS.

31. (Previously Presented) The method according to claim 29, wherein the maximum power ratio is used for selecting an appropriate transport format combination in a transport format selection procedure performed by the user equipment.

32. (Previously Presented) The method according to claim 26, further comprising:

determining the occupancy of a buffer in the user equipment buffering data to be transmitted via the E-DCH;

setting the happy-bit to request the Node B to increase the uplink resources for uplink data transmissions via the E-DCH, if all of the following criteria are met:

- a) the UE has enough power available to transmit at a higher data rate,
- b) the maximum uplink resources set by scheduling grants from the Node B controlling the serving cell require more than a configurable number of transmission time intervals for transmitting buffered uplink data via the E-DCH, and
- c) the user equipment is utilizing the maximum uplink resources set by scheduling grants for scheduled uplink data transmission.

33. (Previously Presented) The method according to claim 26, wherein the scheduling grant indicates the maximum uplink resources all user equipments controlled by the Node B of the serving cell transmitting data via an E-DCH respectively are allowed to utilize for scheduled uplink data transmissions via the E-DCHs within a transmission time interval.

34. (Previously Presented) The method according to claim 26, wherein the user equipment is in soft handover between the serving cell controlled by the Node B and a non-serving cell controlled by another Node B, and the method further comprises:

transmitting the scheduled uplink data via another E-DCH to the other Node B controlling the non-serving cell, and

setting the maximum uplink resources the user equipment is allowed to utilize for scheduled uplink data transmissions via both E-DCHs according to a scheduling grant received from the Node B controlling the serving cell.

35. (Previously Presented) The method according to claim 34, further comprising:
receiving a relative scheduling grant from the Node B controlling the non-serving cell indicating to decrease the amount of uplink resources utilized by the user equipment,
decreasing the amount of uplink resources utilized by the user equipment in response to the relative scheduling grant, and
setting the maximum amount of uplink resources to a decreased amount of uplink resources for scheduled uplink data transmission in a next transmission time interval.

36. (Canceled).

37. (Previously Presented) The method according to claim 35, wherein the control information transmitted via the E-DPCCH to the Node B controlling the serving cell further comprises a transport format indicator indicating a transport format combination used for transmitting scheduled uplink data to the Node B controlling the serving cell within a transmission time interval, wherein the transport format indicator indicates a transport format combination utilizing a lower amount of uplink resources than allowed by the Node B of the serving cell in the scheduling grant, and

if the user equipment is transmitting scheduled uplink data via the E-DCH to the Node B controlling the serving cell utilizing the decreased amount of uplink resources, setting the happy-bit in the control information transmitted in the transmission time interval to the Node B controlling the serving cell,

wherein the combination of the transport format indicator and the happy-bit in the control information indicates to the Node B controlling the serving cell that the maximum amount of uplink resources has been decreased based on a relative scheduling grant received from the Node B controlling the non-serving cell.

38. (Previously Presented) A user equipment (UE) for communicating control information associated to uplink data on an Enhanced Dedicated Channel (E-DCH) of a Universal Mobile Telecommunication System (UMTS), the user equipment comprising:

a transmitter for transmitting via an Enhanced Dedicated Physical Control Channel (E-DPCCH) to a Node B control information associated to uplink data, wherein the control information comprises a happy-bit that, when set, indicates to the Node B controlling a serving cell that the user equipment could use more than a maximum amount of uplink resources allowed by scheduling grants for transmitting scheduled uplink data via the E-DCH, and

wherein the transmitter does not set the happy-bit, if the user equipment transmits scheduled uplink data via the E-DCH without utilizing the maximum amount of uplink resources for scheduled uplink data.

39. (Previously Presented) The user equipment according to claim 38, wherein the transmitter does not set the happy-bit if:

- a) the UE has not enough power available to transmit at a higher data rate or
- b) the user equipment is not transmitting as much scheduled uplink data as allowed by the maximum uplink resources set by scheduling grants.

40. (Previously Presented) The user equipment according to claim 38, further comprising:

a receiver for receiving a scheduling grant setting the maximum amount of uplink resources the user equipment is allowed to utilize for the transmission of scheduled uplink data via the E-DCH from the Node B controlling the serving cell.

41. (Previously Presented) The user equipment according to claim 38, wherein a scheduling grant updates a serving grant indicating a maximum power ratio the user equipment is allowed to use for transmissions of scheduled uplink data on the E-DCH.

42. (Previously Presented) The user equipment according to claim 41, wherein the maximum power ratio defines a power ratio of the E-DPDCH channel and a Dedicated Physical Control Channel (DPCCH) in the UMTS.

43. (Previously Presented) The user equipment according to claim 41, wherein the maximum power ratio is used for selecting an appropriate transport format combination in a transport format selection procedure performed by the user equipment.

44. (Canceled).

45. (Previously Presented) A computer readable medium storing instructions that, when executed by a processor of a user equipment (UE), cause the user equipment to communicate control information related to uplink data on an Enhanced Dedicated Channel (E-DCH) of a Universal Mobile Telecommunication System (UMTS), by:

transmitting via an Enhanced Dedicated Physical Control Channel (E-DPCCH) control information associated to uplink data to a Node B controlling a serving cell, wherein the control information comprises a happy-bit that, when set, indicates to the Node B that the user equipment could use more than a maximum amount of uplink resources allowed by scheduling grants for transmitting scheduled uplink data via the E-DCH, and

not setting the happy-bit, if the user equipment transmits uplink data via the E-DCH without utilizing the maximum amount of uplink resources for scheduled uplink data.

46-49. (Canceled).

50. (Previously Presented) The method according to claim 26, further comprising the step of setting the happy-bit to request the Node B to increase the uplink resources for uplink data transmissions via the E-DCH, if all of the following criteria are met:

- a) the user equipment has enough power available to transmit at a higher data rate;
- b) transmitting uplink data currently buffered for transmission via the E-DCH would require more than a configurable period of time when utilizing the resources set by the scheduling grants; and
- c) the user equipment is utilizing the maximum uplink resources set by scheduling grants for scheduled uplink data transmission.

51. (Previously Presented) The user equipment according to claim 38, wherein the transmitter sets the happy-bit to request the Node B to increase the uplink resources for uplink data transmissions via the E-DCH, if all of the following criteria are met:

- a) the user equipment has enough power available to transmit at a higher data rate;
- b) transmitting uplink data currently buffered for transmission via the E-DCH would require more than a configurable period of time when utilizing the resources set by the scheduling grants; and
- c) the user equipment is utilizing the maximum uplink resources set by scheduling grants for scheduled uplink data transmission.

52. (Previously Presented) The computer readable medium according to claim 45, further storing instructions that when executed by the processor of the user equipment cause the

user equipment to set the happy-bit to request the Node B to increase the uplink resources for uplink data transmissions via the E-DCH, if all of the following criteria are met:

- a) the user equipment has enough power available to transmit at a higher data rate;
- b) transmitting uplink data currently buffered for transmission via the E-DCH would require more than a configurable period of time when utilizing the resources set by the scheduling grants; and
- c) the user equipment is utilizing the maximum uplink resources set by scheduling grants for scheduled uplink data transmission.